interconnected by the mounts **54**, which are generally wedge-shaped members, as best shown in FIG. **5**. The mounts **54** and side walls **60** are unitary with one another. The mounts **54** have opposing curved surfaces **58** that are in close proximity to the star gears **32** and generally follow the curvature of the teeth of the star gears **32** so that any oil on the curved surfaces **58** will likely find its way to the star gears **32** for additional lubrication.

The mounts **54** are circumferentially spaced about the carrier **34** to provide apertures **98** through which the star gears **32** extend to engage the ring gear **38**. Returning to FIG. **2**, the side walls **60** include holes **62** for receiving a journal bearing **64** that supports each of the star gears **32**. Each journal bearing **64** is retained within the carrier **34** by retainers **66** fastened to the side walls **60**.

Referring to FIG. **2**, oil baffles **68** are arranged between the side walls **60** near each of the mounts **54**. Referring to FIGS. **6** and **7**, the baffles **68** include ends **72** that abut the mounts **54**, in the example shown. The baffles **68** also include opposing curved surfaces **70** arranged in close proximity to the star gears **28**. The curved surfaces **58**, **70** are contiguous with and adjoin one another, in the example shown, and provide gear pockets **102** that receive the star gears **32**. A gear pocket **104**, which receives the sun gear **28**, is also provided between a surface **73** on each of the baffles **68** opposite the ends **72**.

In one example, one of the side walls **60** includes holes **74** that receive fasteners **76** which secure each of the baffles **68** to the carrier **34**. The baffles **68** include a lubrication passage provided by a primary passage **86** that fluidly communicates with a lubricant distributor **78**. The lubricant distributor **78** is fed oil from a lubricant supply **96**. In one example, the baffles **68** include openings **82** that receive a tube **80** extending through a hole **83** in the side wall **60**. Seals **84** seal the tube **80** to the opening **82** and lubricant distributor **78**. Other tubes **92** having seals **84** are used to provide oil to an external spray bar **94** through another lubrication passage (spray bar passage **93** that extends through one of the baffles **68**). The external spray bar **94** is secured to the carrier **34** and sprays oil in the vicinity of the sun gear **28** near the splined connection **30** (shown in FIGS. **2** and **7**).

The primary passage **86** is in communication with first and second passages **88**, **90** that spray oil on the teeth of the sun and star gears **28**, **32**. In the example shown, the first and second passages **88**, **90** are arranged ninety degrees from one another.

With the example baffles **68**, lubricant distribution is integrated into the baffle so that separate components are eliminated. The baffles **68** can be constructed from a different, lighter weight material than the carrier **34**.

The example carrier **34** can be constructed from one piece, which improves the structural integrity of the carrier. A central opening **100** is machined in at least one of the side walls **60** and provides the gear pocket **104**. Gear pockets **102** are machined between the side walls **60** and mounts **54** for each of the star gears **32** and form apertures **98** at an outer circumference of the carrier **34**. Referring to FIG. **5**, the star gears **32** are inserted into the central opening **100** (see FIG. **6**) and moved radially outwardly so that they extend through the apertures **98** and are preferably in abutment with the mounts **54** (position indicated by dashed lines in FIG. **5**). In this position, there is an adequate gap, t, between the teeth of adjacent star gears **32** to accommodate a width, w, of the end **72** of the baffles **68**. Once the baffles **68** have been inserted, the star gears **32** can be repositioned, as shown by the solid lines, and the sun gear **28** can be inserted into the central opening **100** so that it meshes with the star gears **32**. The baffles **68** are secured to the carrier **34** using fasteners **76**. The

tubes **80**, **92** can be inserted and the rest of the lubricant distribution system can be connected.

During operation of the turbine engine, imbalances in rotating engine components, for example, due to manufacturing imperfections, and transient flexure of engine shafts and support frames can subject the gears of the epicyclic gear train to moments and/or forces. The present invention can at least partially reduce these moments and forces by compensating for movement of the epicyclic gear train relative to the compressor section. For example, referring to FIGS. **8**A and **8**B, where an axial shift decreases a distance between the epicyclic gear train and the compressor section, one or more of the flexible linkages **110**, **112** can adjust to correspondingly decrease an overall length of the shaft **24**. Specifically, the inner ends **142**, **146** of the first and the second diaphragms **136**, **138** of the first flexible linkage **110** can deflect toward one another and thereby decrease the axial distance between the aft end **118** of the first shaft section **106** and the forward end **116** of the second shaft section **108**. The outer end **158** of the diaphragm **152** of the second flexible linkage **112** can be shifted forward relative to its inner end **156**, thereby decreasing the axial distance between the aft end **120** of the second shaft section **108** and the engine shaft coupling **172**. In another example, an axial misalignment between the gear train and the compressor centerline can occur. To accommodate the misalignment, one or more of the flexible linkages **110**, **112** can deflect to permit the rotational centerline **194**, **196** of a shaft section **106**, **108** to skew and thereby accommodate the misalignment. In FIG. **9**A, the centerlines **194**, **196** of the shaft sections **106**, **108** are shown aligned with one another. In FIG. **9**B, in contrast, the centerline **194** of the first shaft section **106** is skewed from the centerline **196** of the second shaft section **108**. It should be noted that the deflections of the flexible linkages **110**, **112** within the shaft embodiments shown in FIGS. **8**B and **9**B are exaggerated to facilitate the explanation.

While various embodiments of the present invention have been disclosed, it will be apparent to those of ordinary skill in the art that many more embodiments and implementations are possible within the scope of the invention. Accordingly, the present invention is not to be restricted except in light of the attached claims and their equivalents.

What is claimed is:

1. A shaft for a gas turbine engine, comprising:

a first shaft section, extending between a forward axial end and an aft axial end along a first axial centerline;

a second shaft section, extending between a forward axial end and an aft axial end along a second axial centerline;

a first flexible linkage including a bridge section connected between a first diaphragm and a second diaphragm, which first diaphragm is connected to the aft axial end of the first shaft section, and which second diaphragm is connected to the forward axial end of the second shaft section; and

a second flexible linkage including a diaphragm and a hub, which diaphragm cantilevers radially outwardly from an inner radial end to an outer radial end and is connected to the aft axial end of the second shaft section, and which hub is connected to the outer radial end of the second flexible linkage diaphragm, and includes an engine shaft coupling connected to the hub.

2. The shaft of claim **1**, wherein the diaphragm of the second flexible linkage radially tapers such that a thickness of the diaphragm at the inner radial end is greater than the thickness at the outer radial end.